

FIG. 1 is a schematic diagram of a circuit for measuring the internal resistance of a battery. The circuit includes a voltage source V_H (10), a switch S_1 (20), a load resistor R_L (14), a sense resistor R_s (17), and two operational amplifiers A_1 (22) and A_2 (24). The output of A_1 is connected to the ADC (30) and the output of A_2 is connected to the ADC (40). The ADC (30) and the ADC (40) are connected to the uP (40). The circuit is powered by V_H (10) and INTERNAL GROUND (17). The current I_1 (11) flows through the load resistor R_L (14) and the sense resistor R_s (17). The voltage V_L (12) is the voltage across the load resistor R_L (14) and the voltage V_s (13) is the voltage across the sense resistor R_s (17). The output of A_1 is V_1 (21) and the output of A_2 is V_2 (23).

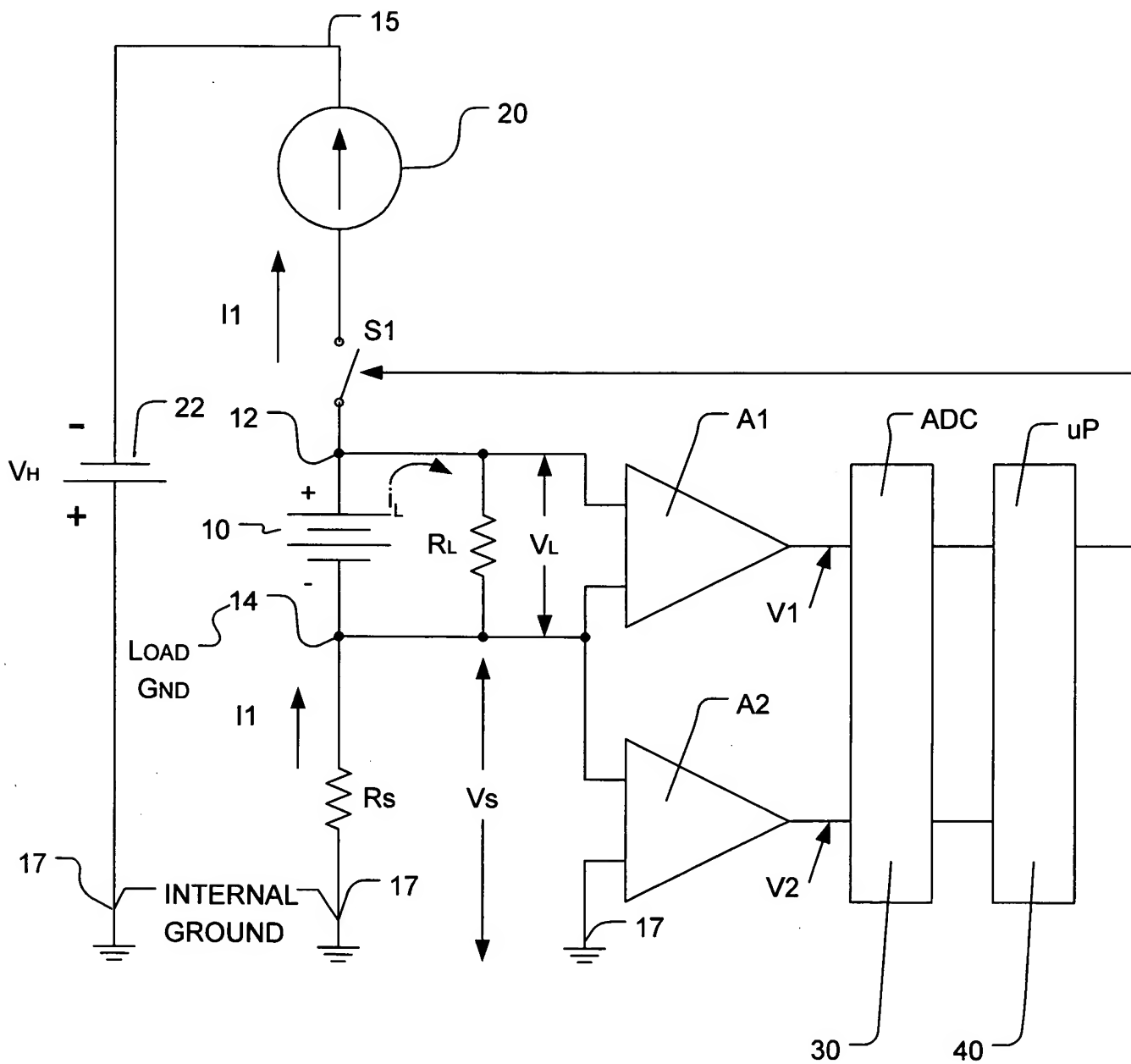


FIG 1

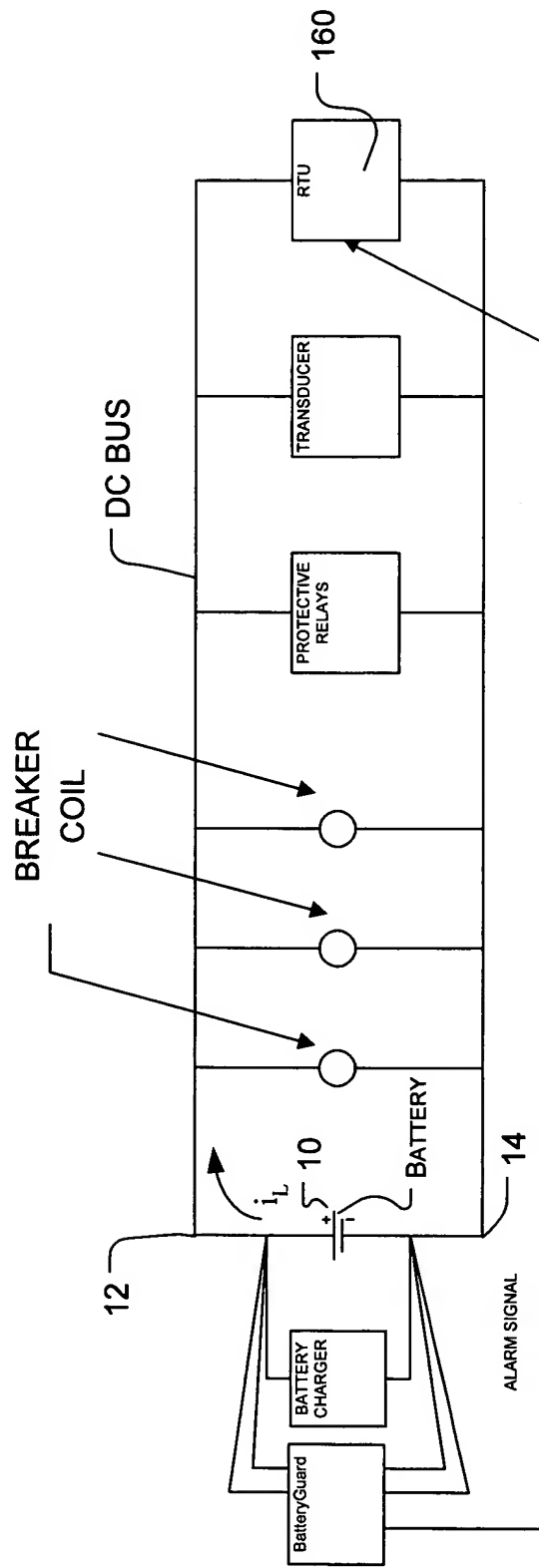


FIG 1A

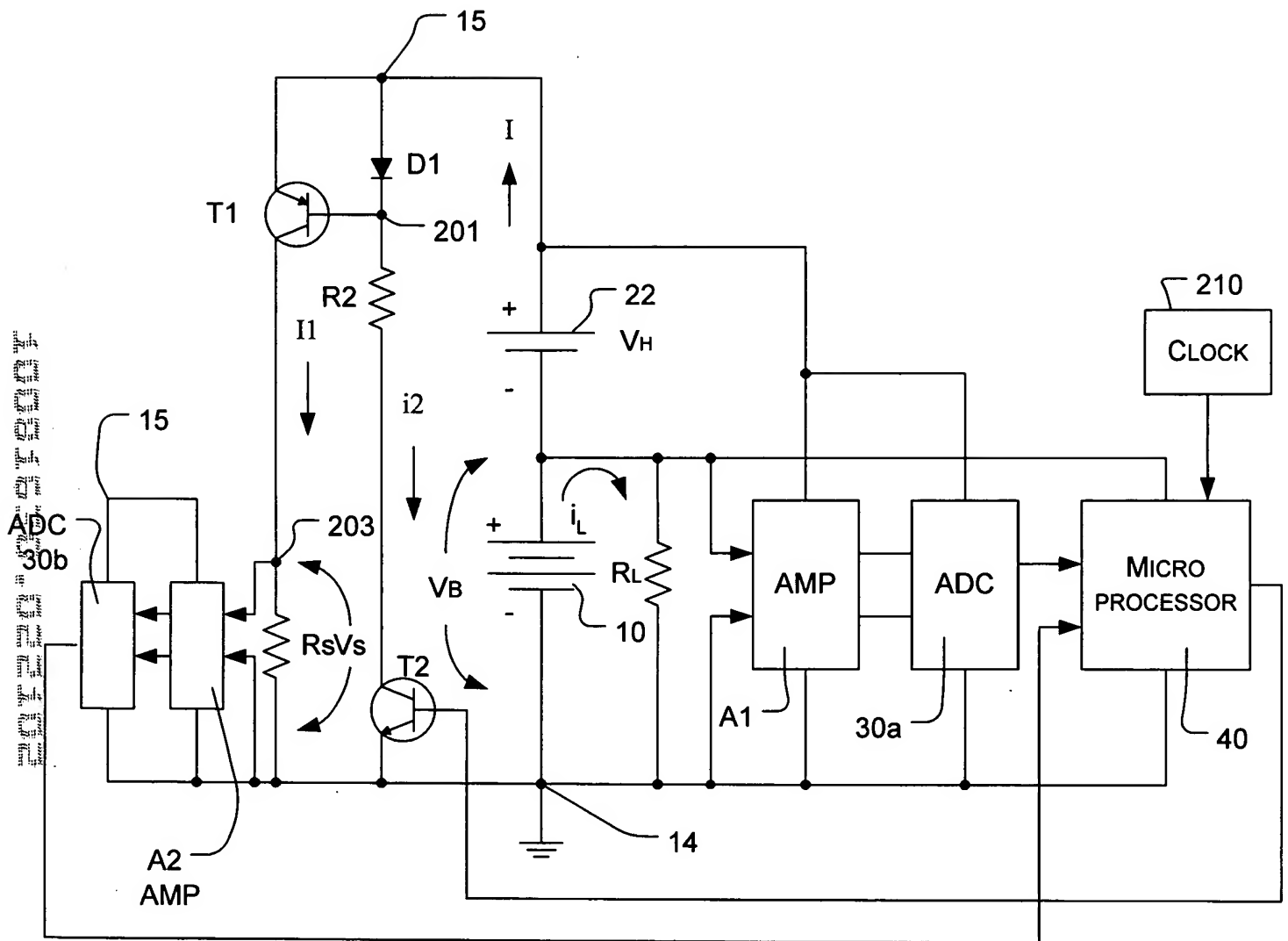


FIG 2

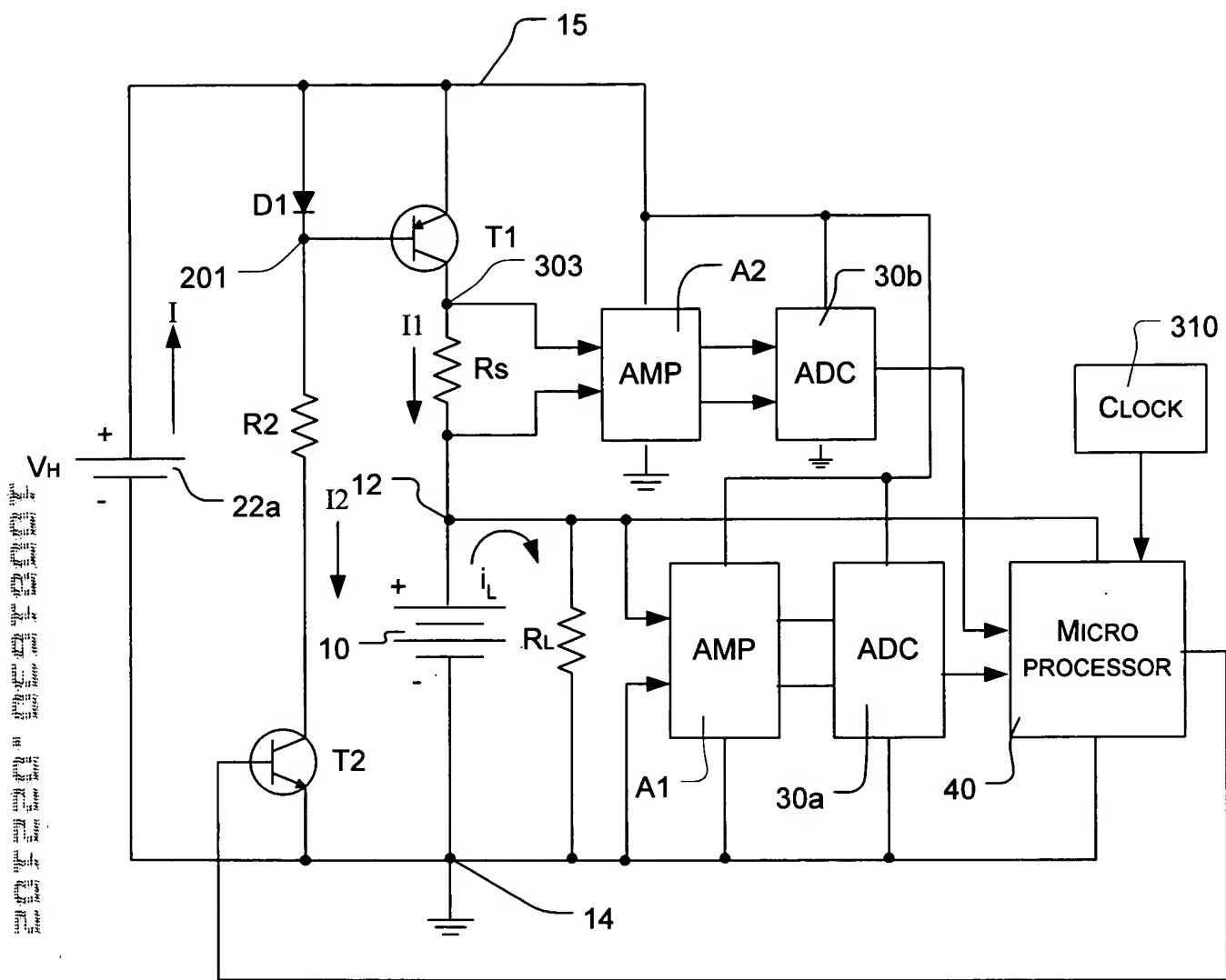


FIG 3

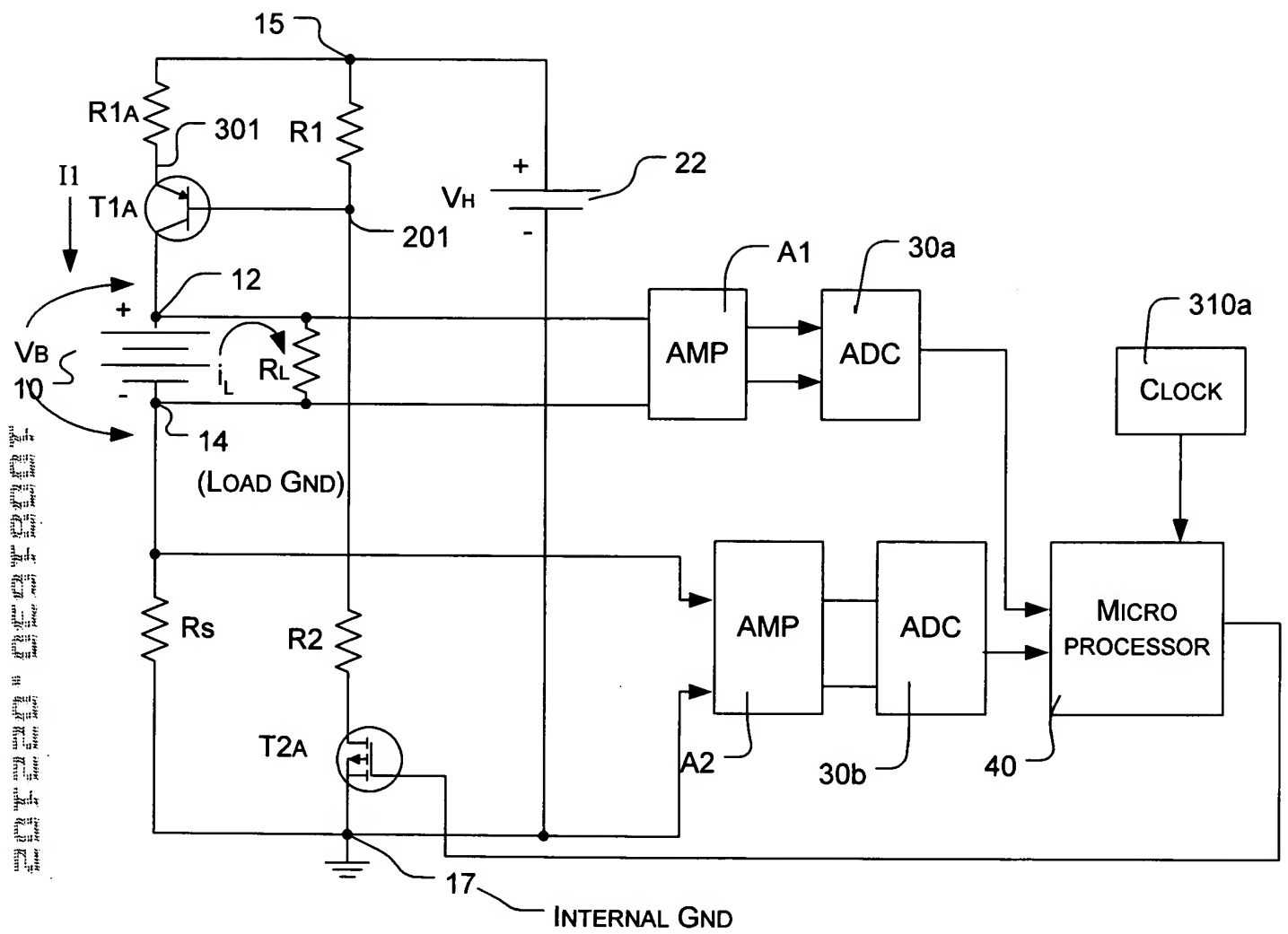


FIG 3A

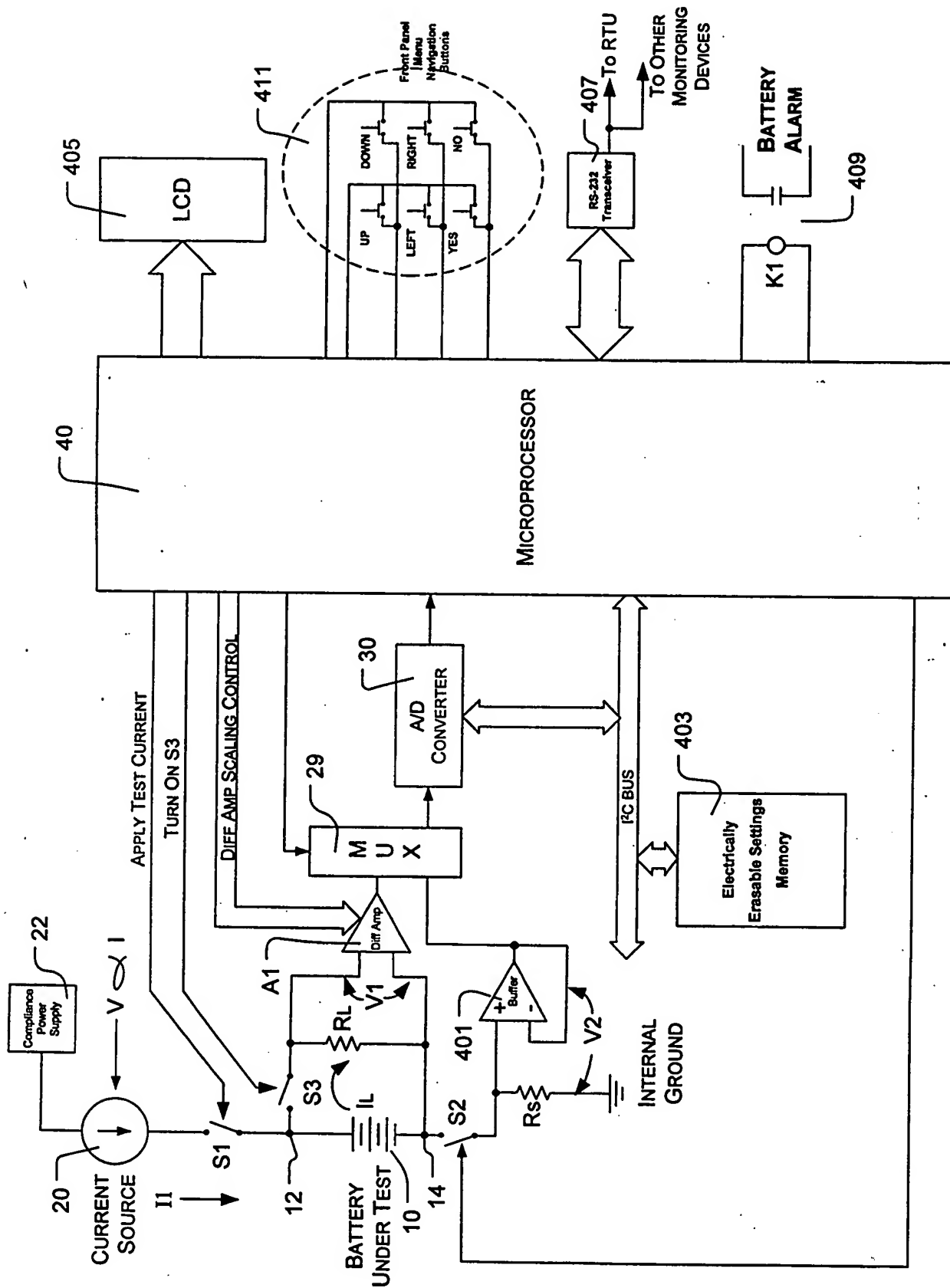


FIG 4

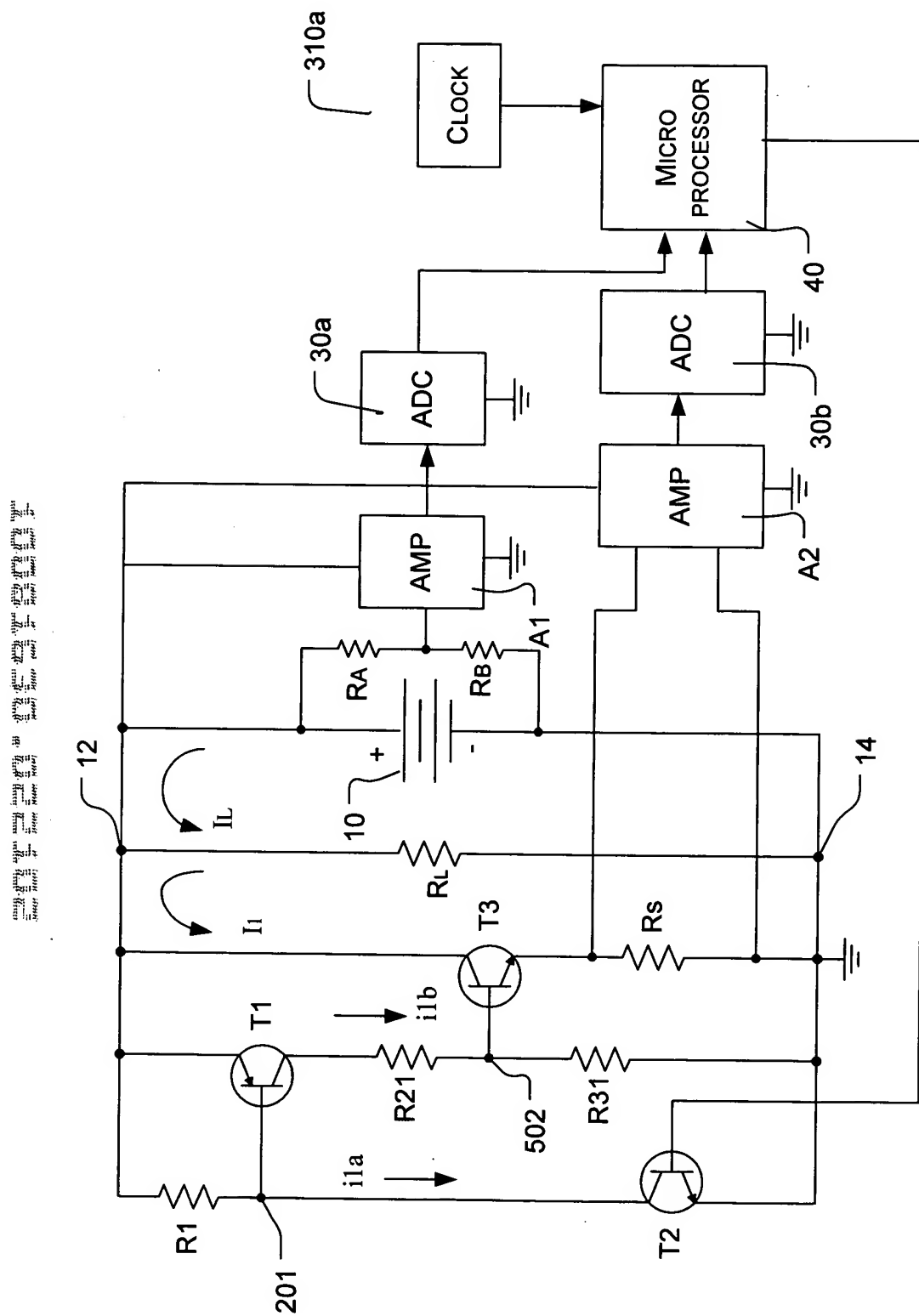


FIG 5